The Boeing Company
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April 30, 2010
9L-22-N410-ST-083

Bob Warren
Section Manager
Toxics Cleanup Program
Washington State Department of Ecology
Northwest Regional Office
3190 – 160th Ave S.E.
Bellevue, Washington 98008-5452

Subject: Interim Action for Removal of Concrete Joint Material
North Boeing Field/Georgetown Steam Plant Agreed Order, DE 5685
Notice of Dispute

Dear Mr. Warren,

Thank you for the Ecology letter of April 23, 2010 regarding Ecology's comments on our proposed interim actions to address concrete joint materials. We appreciate Ecology's commitment to work with Boeing on source control actions for Slip 4, while minimizing disruptions to our flight line operations at the site.

In reply to Ecology's letter, we are providing the following responses to the additions and changes requested by Ecology:

- *The proposal must state that caulk with concentrations of PCBs exceeding 1 mg/kg will be removed from the site. Ecology's review of available data and reports indicates that the remaining contaminated caulk is a source of continuing contamination to the property and to Slip 4 sediments. It is necessary to remove caulk with PCBs above 1 mg/kg because of the potential for releases of caulk to the property and to the storm drain system.*

  We would like to continue discussions on appropriate cleanup levels for concrete joint compounds at the North Boeing Field site as discussed in Attachment 1. We believe that the additional investigations and activities planned under the Work Plan for Further Investigation and Remedial Action Based on Storm Drain Structure Analytical Results and Work Plan for Human Health Risk Assessment, Transport Evaluation for Concrete Joint Material, and Remedial Action Based on Evaluation Results would result in the completion of interim remedial actions that would properly address the removal of PCBs in construction materials, including concrete joint compounds (caulk). However, we understand and share Ecology's goal of reducing potential sources of PCB contamination to Slip 4.

  Boeing has a number of ongoing practices to prevent residual joint compounds containing low levels of PCBs from contributing to the contamination of sediment in Slip 4. For example, Boeing uses street sweepers to clean all flight line and taxiway areas on a daily basis. In

addition, Boeing has implemented other source control measures including the installation of catch basins and separators to retain solids, cleaning and removal of solids from catch basins and oil/water separators, and implementing other protective measures including the use of catch basin filters and other stormwater controls.

Although we disagree with the need to remove concrete joint compounds with PCBs above 1 mg/kg, we are hereby proposing to implement a caulk removal interim action, in order to address Ecology's concern.

Boeing proposes to implement the removal or remediation of all caulking materials, regardless of PCB concentration, in the Propulsion Engineering Labs (PEL) area of the North Lateral drainage basin. This addresses Ecology's concern that additional work needs to be performed in the North Lateral drainage basin, where PCBs continue to be detected at elevated levels in suspended storm drain solids exceeding sediment management standards, and addresses Boeing's concern of minimizing disruptions to flight line operations. The area for this removal work is shown on the enclosed figure (Attachment 2).

For this proposed work, no samples would be collected prior to removal. All concrete joint sealant compounds in this area would be removed to the extent practicable. Details of this removal work would be added to one of the work plans listed above, or would be included in a separate work plan to be submitted to Ecology. It is anticipated that joint sealant compound removal work in this area could take longer than one year to complete. There are practical limits as to when calk can be removed and new material installed based on weather primarily rainfall and curing temperature.

- *The proposal must be revised to include a more rigorous characterization of caulk at North Boeing Field. The proposal does not include additional characterization of caulk as discussed at the April 22, 2010 meeting. There is significant variation in concentrations of polychlorinated biphenyls (PCBs) within some of the caulk types identified at North Boeing Field. Visual identification of caulk types followed by very limited sampling is not sufficient for complete characterization of caulk at North Boeing Field. In addition, the proposal does not include further resampling of new caulk in areas that previously contained caulk with significant levels of PCBs.*

  A more rigorous characterization of caulk will be provided in the work plans specified above, with the exception of sampling caulk materials in the North Lateral drainage basin (where caulk will be completely removed).

- *The proposal as currently written does not specify screening levels that will be used for comparison to results from storm drain structure sampling and testing. The screening levels must be equal to or less than the screening criteria Ecology is currently using for comparison to preliminary results from sampling and testing of stormwater and storm drain solids at North Boeing Field. The proposal as currently written does not specify screening levels*

that will be used for comparison to results from storm drain structure sampling and testing.

Screening levels for comparison of results from storm drain structure sampling and testing will be discussed with Ecology and included in the work plans.

- *Boeing must explain how "venting of onsite buildings" will constitute a remedial measure at the site. This explanation is needed before Ecology can consider this activity as a potential remedial measure.*

The remedial measures listed in our email response of April 22nd were intended to provide only a conceptual idea of the types of remedial measures that may be considered. Remedial measures for consideration will be included in the work plan, and appropriate final remedial measures will be evaluated after the data is received.

- *Ecology does not object to Boeing performing a human health risk assessment for PCBs at this time. However, additional risk analyses may be required in the future for other contaminants of concern that are identified at the site.*

We agree that additional risk analysis may be required in the future for other contaminants of concern.

- *Boeing must prepare a plan with a rationale for the locations of PCB samples. The flow chart for the transport evaluation states that PCB concentrations will be measured in surface solids entering the storm drain system in "random" catch basin and concrete joint material near dust and surface solids sample locations. Boeing needs to prepare a detailed sampling plan that includes a sampling rationale.*

Detailed sampling plans will be submitted as described above.

- *The flow chart for the work plan for further investigations must be revised to indicate that wherever possible investigations will be done concurrently instead of sequentially. In addition, this flow chart indicates that if initial sampling results do not exceed COC screening levels then there is no need for further evaluation. A single sampling event is not sufficient to determine that no further evaluation is necessary. At this stage of the investigations, the flow chart must indicate that periodic confirmation sampling will be performed to verify that storm drain structures are not being contaminated or recontaminated as a result of subsequent releases to the storm drain system.*

A revised flow chart will be submitted with the work plan.

Boeing is aggressively implementing a number of actions in the North Lateral drainage basin on a voluntary basis to reduce concentrations of contaminants in suspended solids. The North Lateral is the only area at NBF that has consistently exceeded the total organic carbon normalized sediment quality standard for PCBs, which is why Boeing is taking the following steps: pressure washing surface areas, removing PCB contaminated soil, removing or replacing

storm drain lines, sealing storm drain structures, conducting comprehensive sampling of all storm drain structures, completing the cleanout of storm drain systems, implementing investigation work plans noted above, and completing interim actions resulting from these investigations. A list of interim actions, voluntary actions, and other source control work is provided in the attached table. Boeing has demonstrated its commitment to identifying and remediating potential sources of contamination or recontamination to Slip 4. Since 2000 alone, Boeing has spent almost $11 million on source control efforts at North Boeing Field.

If source control actions cannot be demonstrated by the end of this year, we have committed to implement stormwater treatment options as discussed in our stormwater contingency planning letter, to allow the Slip 4 cleanup to proceed on schedule.

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We look forward to meeting with you to discuss the additional information provided in this response and to plan for these interim remedial actions. Please let me know if you have any questions or concerns that need to be resolved prior to meeting.

Sincerely,

Steven Tochko
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Attachments:

1. Dispute Resolution of Concrete Joint Material Cleanup Level
2. Joint Compound Removal Area Figure
3. List of Interim Actions, Voluntary Actions and Other Source Control Work

cc (email):

Sheila Eckman, EPA
Peter Dumaliang, KCIA
Jennie Goldberg, City of Seattle
Scott Downey, EPA
Dan Duncan, EPA
Shawn Blocker, EPA
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